Abstract of the Disclosure

The system automatically extracts cinematic features, such as shot types and replay segments, and object-based features, such as the features to detect referee and penalty box objects. The system uses only cinematic features to generate real-time summaries of soccer games, and uses both cinematic and object-based features to generate near real-time, but more detailed, summaries of soccer games. The techniques include dominant color region detection, which automatically learns the color of the play area and automatically adjusts with environmental conditions, shot boundary detection, shot classification, goal event detection, referee detection and penalty box detection.